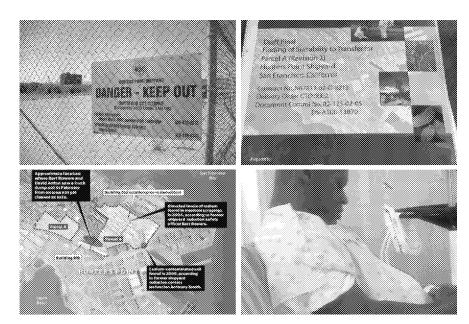
Ahimsa Porter Sumchai, MD Submission to Hunters Point Community Lawsuit June 23, 2018

Determination of Physical and Psychological Harm to Residents, Workers and Plaintiffs of the Hunters Point Community Lawsuit Due to Tetra Tech EM, Inc. Criminal Fraud and Negligence.





"Hunters Point is unfolding into the biggest case of eco-fraud in U.S. history."

Jeff Ruch - Executive Director Public Employees for Environmental Responsibility 04/09/18

"The data revealed not only potential purposeful falsification and fraud in terms of sample and/or data manipulation, they also reveal the potential failure to conduct adequate scans, a lack of proper chain of custody for ensuring samples were not tampered with, extensive data quality issues including off-site laboratory data and general mismanagement of the entire characterization and clean up project."

John Chestnut - EPA Superfund Manager

The US Navy is not a public health organization...it is a military organization complicit in an exploding public health crisis at the Hunters Point Shipyard. Yet with no evidence based human health risk data to support it's pronouncement, the US Navy is the lead voice in a deafening echo chamber of government officials, health department representatives and mainstream media outlets who absurdly claim no risk to public health or harm to residents, workers or the environment has occurred due to remediation and redevelopment activities at the Hunters Point Shipyard in San Francisco - a federal Superfund site.

A federal Superfund site is by definition a property where the EPA used a Hazard Ranking System to calculate a score based on actual or potential release of hazardous substances causing harm to human health. A score of 28.5 or more on a scale of 1 to 100 places a property on the National Priorities List. The Hunters

Point Shipyard has a Hazard Ranking site score of 49 out of 100! Thus, by legal definition and government standards the Hunters Point Shipyard is a harmful property and adverse health effects documented in residents living adjacent to it in the 94124 zip code region of southeast San Francisco can be presumed causal.

What is harm and it's meaning in legal terms? USLegal defines harm as an injury, loss or damage. Harm can be physical, psychological or potential. Harm can be a material or tangible detriment. Harm principle refers to a theory of crime that an action can be banned if it causes harm to someone.

Both the Navy and Tetra Tech have issued public statements in response to "the biggest case of eco-fraud in U.S. history" meeting legal standards as admission of harm directly caused by the criminal fraud and negligent actions of Tetra Tech, EM, Inc. employees and contractors.

"Tetra Tech vehemently rejects this type of activity and will pursue all legal actions available to recover the HARM the actions these former employees have caused to Tetra Tech, the Navy, and the local community."

Tetra Tech company statement 05/03/18

"The scandal has brought on negative media attention and caused residents who moved into homes and condos next to where the cleanup is taking place to worry about their safety" Laura Duchnak -Director of Base Closure -US Navy per NBC Investigative Report Liz Wagner 05/04/18

The Agency for Toxic Substances and Disease Registry is the federal public health agency mandated to protect human health and determine risk exposure to toxic releases at a Superfund site. ATSDR is a division of the U.S. Department of Health and Human Services and Centers for Disease Control located in Atlanta, Georgia. It's western regional office is next door to the Region 9 EPA at 75 Hawthorne street in San Francisco.

The Human Health Risk Assessment (HHRA) process is the established approach to evaluate the potential for adverse health effects from exposure to environmental toxins. The HHRA is an integral part of the remedial response process defined by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) also called Superfund.

Despite a mushrooming cloud of evidence the public has been exposed to fraudulently cleared radiation contaminated soils, buildings, landfills and radioactive particle pollution volatilized in air at the Hunters Point Shipyard, neither the US Navy or Region 9 EPA have requested ATSDR conduct a Human Health Risk Assessment (HHRA) at the Hunters Point Shipyard as mandated by CERCLA. The goal of a HHRA is to determine the magnitude of potential threats to human health due to exposure to hazardous substances. HHRA objectives are to:

1. Provide an analysis of baseline risks.

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- 2. Provide a baseline of levels of chemicals on site protective of public health.
- 3. Provide a basis for comparing remedial alternatives.
- 4. Provide a consistent approach to evaluation and documentation of public health threats.

"ATSDR protects communities from harmful health effects related to exposure to natural and man-made hazardous substances. We do this by responding to environmental health emergencies, investigating emerging environmental health threats; conducting research on the health impacts of hazardous waste sites; and

building capabilities of and providing actionable guidance to state and local health partners." [HYPERLINK "http://atsdr.cdc.gov"]

ATSDR conducted an HHRA at HPS in 2000 following the August Parcel E landfill fire that, according to firefighter testimony, smoldered for over 100 days fueled by explosive concentrations of methane gas pockets as high as 50% volume in air. The ATSDR assessment documented elevations in volatile organic compounds including the WHO designated carcinogen benzene in air samples as well as potential for the short term health effects reported by residents. An ATSDR HHRA is standard protocol following a harmful environmental release under the federal Superfund act. Additionally, it is a logical, mandatory and necessary next step that ATSDR must take.

"I call on the Agency for Toxic Substances and Disease Registry, in it's role in determine chemical threats, protecting communities with children and vulnerable populations who face dangerous environmental health concerns to initiate the health assessment process at HPS to determine whether residual ionizing radiation documented in fraudulently cleared soils, trenches and buildings at multiple sites on the base pose a risk of harm to the surrounding community, workers and visitors and to Statically define that risk." Ahimsa Porter Sumchai, MD - Founding Chair Radiological Subcommittee HPS Restoration Advisory Board. Comments on Parcel G Work Plan submitted 06/16/18

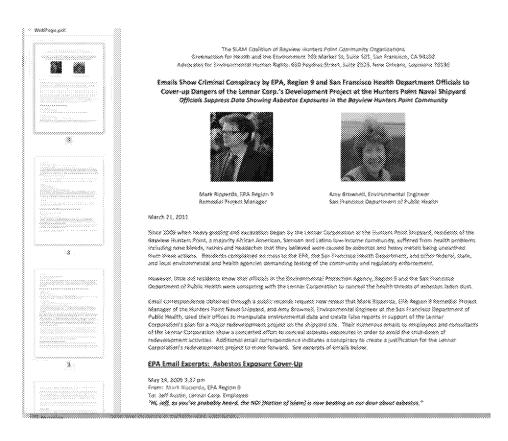
The US Navy's and the EPA's failure to request an ATSDR health risk assessment at the Hunters Point Shipyard is a clear example of governmental neglect, developer collusion and conflict of interest. The Navy shares culpability and liability in creating circumstances that granted Tetra Tech unbridled control over speedy radiological removal operations on the base. In 2006 the Navy implemented a base wide Time Critical Removal Action (TICRA) program granting full contract for implementation to Tetra Tech EM,Inc. from 2006 to 2015. TICRA's are operations taken outside of the 9 step remediation process outlined by CERCLA. While TICRA's speed removal actions for hazardous substances they do so at the expense of accurate human health risk assessments and

CERCLA protections. Thus, the Navy's base wide TICRA program granted Tetra Tech license to "run amok" at HPS with minimal federal oversight and in an effort to protects it's self from legal culpability the Navy repeatedly claims there has been no harm to the public.

The San Francisco Department of Public Health abandoned the mandate to protect residents and workers in the 94124 zip code in August 2004 on adopting Article 31 of the Health Code during city government transfer proceedings for Parcel A that is now the site of townhouse and condominiums overlooking the federal Superfund site. Article 31 establishes enforcement mechanisms including denial of permits, stop work orders and mandatory penalties Documented by the 2010 Civil Grand Jury Report titled Shifting Landscapes, The Hunters Point Shipyard - funding for the oversight and and implementation of Article 31 comes from fees imposed on Lennar Developers by the health department for construction and excavation activities generating more than 50 cubic yards of soil. Additionally, the DPH spokesperson, Amy Brownell, is a professional engineer currently under investigation by the California Board of Professional Engineers and Landscapers based on a decade of evidence documenting her collusion with Lennar Developers and environmental regulators to advance the project. Brownell receives \$153 per

hour in consulting fees from developer fees and DPH receives a \$250 administrative fee for every 50 cubic yards of soil moved at HPS. Thus enjoys a revenue stream from earth moving activities that incentivizes dangerous development activities on a federal Superfund site at the expense of public health and safety.

"The jury found the city has placed itself in a potentially compromising position with Lennar where in essence the wolf is paying the shepherd to guard the flock. By having the developer, Lennar, reimburse the city for expenses associated with the HPS development project, SFDPH has created a situation that could raise doubts in the public's mind about it's commitment to enforce environmental regulations when it might adversely impact Lennar. "Civil Grand Jury Superior Court City & County of San Francisco 2010-2011



The mushrooming scope of the Tetra Tech eco-fraud scandal has led to

Alleged trouble spots



Satellite Image: Google Earth The Chronicle

criminal indictments of two Tetra Tech Radiation Control Supervisors and March of 2008 conclusions by the US Navy and EPA- that in addition to thousands of fraudulent soil samples collected by Tetra Tech employees and contractors documented in it's internal investigation beginning in 2012- 28 fraudulently cleared buildings by Tetra Tech have been identified on five parcels at HPS and that 93% of soil samples tested on parcels transferred to the City & County of San Francisco in 2015 are flawed by "potential falsification, data manipulation and data quality concerns." These parcels are adjacent to townhouses and condominiums where families with children and pets now reside.

Adding to the public health crisis at HPS is whistle blower corroboration that in February 2015, 9 trucks of asphalt carrying 218 tons of soil from HPS were dumped in the Keller Canyon landfill within half a mile of over 2,000 homes. That soil tested positive for cesium-137 and has been excavated with on-going investigations are underway to determine if local drinking water sources were tainted.

The HHRA's conducted at HPS to date are included in the Record of Decision for select parcels. They yield startling evidence of unacceptably high risks for cancer and disease due to exposures to low level radiation contaminated soils, buildings, groundwater, landfills and volatilized particle pollution in air. According to the EPA office of air and radiation:

"Airborne particles, the main ingredient of haze, smoke and dust, can cause a number of serious health problems. Small particles less than 10 microns pose the biggest problems and can affect both heart and lungs. Numerous studies link particulate exposure to increased hospital admissions and emergency room visits and to death from heart or lung diseases. New studies show exposure to high levels of particle pollution to be associated with low birth weight infants, pre-term delivery and fetal and infant deaths." EPA Office of Air & Radiation www.epa.gov

All of these adverse health effects are documented in the 94124 zip code of Bayview Hunters Point where ER visits and hospitalizations for pediatric and adult asthma, congestive heart failure, pulmonary fibrosis and heart attacks triple the statewide average. More than half of all infant mortality in San Francisco occurs in the southeast sector and birth defects for the region were 44.3 per 1,000 compared to 33.1 per 1,000 for the county. Additionally, 580 total years of expected life lost due to cancers of the lung, trachea and bronchi are documented in the 2004 Community Health Assessment. After 2009, DPH no longer posted day on caner incidence and mortality in the 94124 zip code

contributing to concerns government agencies are suppressing health surveillance data from a vulnerable community adjacent to harmful development activities at a federal Superfund site.

According to the National Academies series of reports on radiation health effects called the Biologic Effects of Ionizing Radiation or (BEIR) reports along with the EPA Risk Assessment for low level ionizing radiation exposure.

"Humans are exposed to ionizing radiation from both natural and man made sources. Very high doses can produce damaging effects in tissues evident within days after exposure. Late effects such as cancer, which can occur after more modest doses including the low dose exposures that are the subject of this report, may take many years to develop."

BEIR VII: Health Risks from Exposure to Low Levels of Ionizing Radiation.



Parcel G is a newly created parcel at HPS that did not exist and, thus, is not characterized by the 2004 Historical Radiological Assessment (HRA). Parcel G was "carved out" of radiation contaminated Parcel D, where historical records

document in 1956 Operation Skywatch was conducted by Lockheed Missiles to study dummy missiles structurally identical to live Polaris missiles sent skyward by solid fuel rocket blasts. Multiple tests were conducted. The Polaris A-3 missile was a two stage solid nuclear armed ballistic missile with three W58 thermonuclear warheads developed by the US Navy in 1956 and manufactured by Lockheed Corporation. A huge overhead assembly on Parcel D was erected to catch a multi-ton dummy Polaris missile in mid-air, hurled out into San Francisco Bay and retrieved.

Table 2. Cancer Risks and Noncancer Hazards

Parcel	Redevolopment Block	Exposure Scenario	Cancer Risk'		
			Chemical	Rediciogical	Noncancer Hi
Soil					
&	308	Industrial	2 x 10 ⁷	NA.	« †
	37	Industrial	4 x 10 4	Not Estimated	< 1
	38	Polyatra:	4 x 10 °	2 x 10°	« \$
	29	Potuatrai	3 x 10°	NA.	« \$
	008-1	Recreational	4 x 10°	NA.	<1
	39	Recreational	1 x 10 *	4 x 10 °	* 1
	304	Aesidential	2 x 10 '	1 x 10°	
Groundwater			Exposure Ares*	Maximum Cancer Risk	Noncarcer Risk (Total RME HI)
8	29, 30A, 30B, 37, 38, 39, and 3055-1	industrial	18-33 Plume, 81-08, and 81-71 Plumes	1 × 10°	*

Nicites:

- a Listed risk value is maximum in each redevelopment block. These blocks and their associated reuses are based on the "Hunters Point Shippard Redevelopment Plan." Reuse areas and development blocks may change in the future.
- b. Radiotogical risk from organing sewer and storm drain removal across Panosis G. O-2, UC-1, and D-1 was assessed at 5 x E-6.
- : Rink was not estimated in the radiological addersture for the Building 436 site at the time of the radiological addersture.
- d. Maximum of the identified risk from all plumes.

NA. Not applicable, no redictogically impacted areas or buildings were located in this block

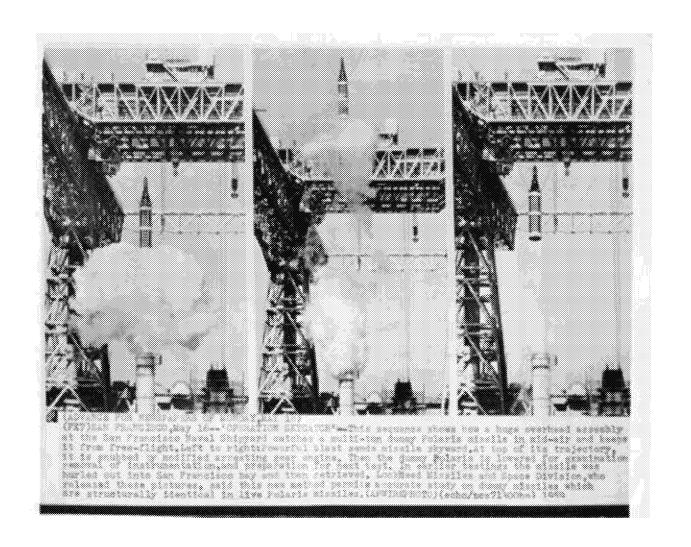
ROD for Percel G Hunters Point Shipyard CHAD.3213.0030.0009

Parcel G was the subject of a Board of Supervisors hearing on May 14, 2018 and is slated to undergo retesting in coming months as part of the Parcel G Work

Plan issued by the Navy for public comment on June 15, 2018.

Under the redevelopment plan Parcel G sites a Shipyard South Multi-Use District in proximity to the Parcel E shoreline and radiation contaminated landfill. Parcel E meets the Parcel G boundary at "H" street. Developers have proposed siting residential development in this MUD and this fact explains the pressure to retest and transfer the parcel to the city and county for reuse.

The Parcel G HHRA -published in the 2009 Record of Decision-is inadequate in it's assessment of risk for a parcel slated for residential development and does not include two buildings included in the Parcel G Work Plan that were not identified as radiation impacted by the HRA. Nonetheless it identifies unacceptably high cancer risks of one in 10,000 and Hazard Index scores of 6 and 9 for soil and ground water. These findings are of significance in estimating risk of public exposure to fraudulently cleared soils and buildings at HPS as it offers proof from Navy documents of soils with cancer inducing potential.





Determining Carcinogenic Risk to HPS Parcel A Worker Christopher Carpenter

The Hunters Point Annex Parcel A Record of Decision (ROD) was published on November 16, 1995 pursuant to CERCLA by the Department of the Navy. According to the June 4, 2002 New DOD Interim Guidance on RODs, "All RODS need to focus on the risk and actions selected to address risk. Thus, the ROD needs to clearly describe the risks necessitating remediation, document risk exposure assumptions and anticipated land uses, state the remedial action objections and describe the remedy in general terms and it's basis for selection.

The Parcel A ROD selected remedy was no action despite the fact that Building 816 was used as a radiation laboratory and that information presented in the Navy's Proposed Plan for Parcel A an supporting documents do not support the contention that all nine Site Investigation and Remedial Investigation sites "do not pose a threat to human health or the environment."

"Child and adult residents may be exposed to chemicals detected at Ir-59 JAI through direct soil exposure and ingestion of homegrown produce. The total HI for child residents at Ir-59 is 12. This hazard is primarily due to exposure to nickel, chromium and manganese." Draft Final Parcel A RI Report October 16, 1995

The Parcel A Remedial Investigation documents hazard indices 36 times greater than health protective standards for children exposed to soils given a residential exposure scenario at multiple sites as well as soil lead contamination above California modified preliminary remediation goals and a cancer risk of 2X103 at IR-59-JAI. Cancer risks below 10-4 go 10-6 are considered protective of human health by the EPA.

Thus, the Parcel A Record of Decision and supporting documents offer legal evidence supporting soil risk exposures linked to increased cancer and non carcinogenic health effects. While these increased risks where calculated based on residential exposure, a Parcel A worker repeatedly exposed to asbestos, particulate and residual metals that in 2006 led to multiple work shut downs for documented exceedences can claim he faced enhanced risk for exposures leading to death due to a cancer linked to environmental toxins within 10 years of exposure. In addition to proven exposure to asbestos and particulates, the retesting of Parcel A that is currently underway soils, storm drains and sewer systems that never underwent radiological assessment on a federal Superfund site is formal admission the US Navy and it's contractors and developers were wrong in stating Parcel A "does not pose a threat to human health or the environment."